THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte BRIAN L. SIMPSON, GARY M. DISTEFANO, KEVIN M. LOGSDON, STEPHEN M. POPHAM and DONALD C. REID

Appeal No. 1996-1154
Application No. 08/174,497[1]

HEARD: October 5, 1999

Before PAK, WARREN, and LIEBERMAN, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1 through 12 which are all of the claims remaining in the application.

Claim 1 is representative of the subject matter on appeal and reads as follows:

[1] Application for patent filed December 28, 1993.

1. A continuous process for manufacturing purified silver nitrate solutions comprising the steps of:

a) transferring a crude silver nitrate solution, together with a slurry comprising silver oxide, to a multistage agitated reactor thereby forming a mixture;

b) maintaining a continuous weight percent undissolved solids inside the reactor such that silver oxide is 10 to 80 weight percent of said undissolved solids;

c) transporting the mixture through the reactor over a period over a period of 15 minutes to 3 hours to form a reaction product;

d) filtering the reaction product through a continuous filter to form a silver nitrate filtrate and a retentate; and

e) recycling the retentate to the reactor.

To maintain a continuous weight percent of undissolved solids inside the reactor, "a differential density instrument programmed in combination with a computerized signal processor conventionally used to control chemical process" needs to be employed. See specification, page 6, lines 17-21. "Two density measurements are required because a single measurement cannot distinguish between dissolved and undissolved solids." See specification, page 6, lines 28-30. The concentration of undissolved solids is controlled by recycling a particular

amount of retentate to the top of the multistage reactor and adjusting the input of the silver oxide slurry. See specification, page 9, lines 14-27, and page 8, lines 1-20. "The term 'retentate' refers to a slurry of solids that is separated from the filtrate by the filter." See specification, page 2, lines 29-31.

As evidence of obviousness, the examiner relies on the following prior art:

Green	3,554,883	Jan. 12, 1971
Celio	3,623,817	Nov. 30, 1971
Asai et al. (Asai)	4,136,157	Jan. 23, 1979
Katoh et al. (Katoh)	4,909,950	Mar. 20, 1990
Dale	5,141,861	Aug. 25, 1992

Claims 1 through 8 and 10 stand rejected under 35 U.S.C. § 103 as unpatentable over Asai in view of Green and Dale. Claims 9 and 11 stand rejected under 35 U.S.C. § 103 as unpatentable over Asai in view of Green and Dale as applied to claims 1 through 8 and 10, and further in view of Katoh. Claim 12 stands rejected under 35 U.S.C. § 103 as unpatentable

over Asai in view of Green and Dale as applied to claims 1 through 8 and 10, and further in view of Celio.

We have carefully reviewed the specification, claims and applied prior art, including all of the arguments advanced by the examiner and appellants. This review leads us to conclude that the examiner's § 103 rejections are not well founded. Accordingly, we reverse each of the foregoing rejections. Our reasons for this determination follow.

The examiner's § 103 rejections are flawed in at least two aspects. First, none of the references relied upon by the examiner, either individually or in combination, would have suggested employing the multi-stage reactor-separator of the type described in Dale in a crude silver nitrate purification process. Specifically, the examiner has not demonstrated why one of ordinary skill in the art would have found a fermentation multi-stage reactor-separator for producing ethanol to be compatible with and/or useful for the crude silver nitrate purification process of Green and/or Asai. On this record, the examiner simply fails to explain why the different chemistries involved would not negate obviousness.

Second, none of the references relied upon by the examiner, individually or in combination, teaches or would have suggested maintaining a continuous weight percent of undissolved solids inside the multi-stage reactor. Even were we to accept the examiner's unsupported statement that one of ordinary skill in the art would have maintained a continuous weight percent of undissolved solids inside the multi-stage reactor in order to operate the process of Asai or Green continuously, see Answer, page 6, the examiner has not established on this record that one of ordinary skill in the art knew how to maintain a continuous weight percent of undissolved solids inside the multi-stage reactor.

In view of the foregoing, we agree with appellants that the examiner has not established that the claimed subject matter as a whole would have been ***prima facie*** obvious to one of ordinary skill in the art. Accordingly, we reverse each of the examiner's § 103 rejections.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED

CHUNG K. PAK Administrative Patent Judge	)	
CHARLES F. WARREN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PAUL LIEBERMAN Administrative Patent Judge	)	

jrg

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